



Northern Virginia District



Year in Perspective

July 1, 2003 - June 30, 2004

The Virginia Department of Transportation's Northern Virginia District is responsible for building and maintaining roads and bridges in Fairfax, Loudoun and Prince William counties, major roads in Arlington County and in nine cities and towns. The diversity of roadways range from low-volume gravel roads in Loudoun County to the busiest eight-lane highways in the Commonwealth. Here's a closer look at some of the numbers behind your drive.

VDOT in Northern Virginia is responsible for:

- 5,109 miles of roadway equaling 15,504 lane miles
- 1,863 bridges and culverts
- 37.9 million vehicle miles traveled per day

Serves:

- 2 million people
- 1.5 million licensed drivers
- 1.7 million registered vehicles

Employs:

- Nearly 1,000 employees

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District Administrator

Dennis C. Morrison, a 27-year veteran of VDOT, oversees the Northern Virginia District. Morrison, named district administrator in Oct 2004, replaced Tom Farley, who retired in July after serving 11 years in the position.



Morrison left his post as Staunton District Administrator where he served for eight years overseeing the transportation program in the Shenandoah Valley. He also has spent more than 15 years of his career in the urban areas of Richmond and Hampton Roads.

Some of Morrison's major career accomplishments include overseeing the construction of one of Virginia's major toll roads, Richmond's Powhite Parkway and creating the first rural Intelligent Transportation System (Smart Travel) program in the state along the I-81 corridor.

The 54-year-old Virginia Tech graduate has a B.S. in civil engineering and is a native of Martinsville, VA.

"My mission is to help local governments achieve a transportation plan that meets their vision. We need to look at non-traditional ways to improve transportation and ensure that transit, bikeways, technology and teleworking are part of our transportation strategy."

-- Dennis Morrison

Building Roads and Bridges

Fairfax/Arlington/Alexandria



14 projects completed, totalling \$142 million

- I-66 roadway lighting from the Capital Beltway to Route 234
- I-495 sound walls near Route 193
- Air and Space Museum site preparations
- Herndon signal system upgrade
- Van Dorn Street improvements
- Rolling Road and Fullerton Road realignment and turn lanes
- Route 123 landscaping from Burke Lake Road to Lee Chapel Road and widening from Lee Chapel Road to Davis Drive
- Route 233 Bridge repairs near Reagan National Airport
- Wilson Bridge ground improvement, ITS and wetland mitigation
- Springfield Interchange Improvement Project, Phase 5



19 projects underway, totalling \$535 million

- Wilson Bridge submerged aquatic vegetation mitigation; two wetland mitigation sites; bridge for Route 1 Interchange; ground improvements at Telegraph Road; Route 1 Interchange reconstruction and Wilson Bridge tie-in
- Springfield Interchange Improvement Project Phases 4, 6-7
- Beulah Street widening from Franconia-Springfield Parkway to Franconia Road
- Pleasant Valley Road safety improvement to straighten three curves
- Gambrill Road construction of a 223-space park-and-ride lot
- Dulles Toll Road toll plaza expansion at Spring Hill Road and widening ramps at Capital Beltway
- Burke Lake Road widening from Lee Chapel to Fairfax County Parkway
- Route 1 widening from Lorton Road to Armistead Road
- I-395 sign improvements
- Route 123 widening from North Davis Drive to Vulcan entrance
- Lorton Road widening from Route 1 to Silverbrook Road
- West Ox Road widening from Ox Trail to Lawyers Road

Prince William County



5 projects completed, totalling \$17 million

- Fairview Avenue widening from Liberia Avenue to Fairview Avenue
- Route 234 widening from Purcell Road to Snowfall Road
- Pedestrian Bridge at Veteran's Park
- Route 234 sound walls at Clover Hill Road
- Smoketown Road left turn lane addition onto Old Bridge Road



5 projects underway, totalling \$93.3 million

- Richmond Avenue widening
- Route 123 Occoquan River Bridge widening
- Route 234 widening from Snowfall Road to Eclipse Drive
- I-66 widening from Route 234 Bypass to Route 234/Prince William Parkway
- University Boulevard new roadway between Wellington Road and Route 29

Loudoun County

🚧 3 projects completed, totalling \$6 million

- Lime Kiln Road improvements
- Route 606 at Route 28 improvements
- Featherbed Lane bridge rehabilitation

🚧 5 projects underway, totalling \$2.6 million

- Shelburne Glebe Road bridge replacement
- Belmont Ridge Road spot improvements
- Potomac View Road spot improvements
- Ticonderoga Road spot improvements
- Loudoun Orchard Road improvements*

**Loudoun Orchard Road was the first project to be completed under the new Rural Rustic Road Program, a low impact, low cost approach to improving unpaved roads. Approved by the General Assembly in 2002, the program enables VDOT to pave more miles of road with limited funds available.*

Surviving Snow Under Budget



The winter of 2003-04 brought 11 snow and ice storms and cost \$22.2 million of a \$23.5 million budget. The District spent an average of 16 percent less per snow event yet experienced more snow than usual. Using technology more effectively and streamlining operations helped reduce costs. Approximately 1,950 employees and contractors helped during snow removal.

Major Project Milestones



Springfield Interchange Improvement Project

Consists of building more than 50 bridges and widening I-95 to 24 lanes between the Beltway and Franconia Road.

- Opened the mile-long bridge connecting the inner loop of the beltway with I-95 South
- Opened an additional lane on the ramp from the outer loop of the beltway to I-95 South
- Opened new ramp lanes from I-395 South to I-495 North towards Tysons Corner
- Informed more than 100,000 people about the project at the Springfield Interchange Project Information Center, Springfield Mall



Woodrow Wilson Bridge Project: Involves improving and widening the Capital Beltway and interchanges at U.S. Route 1 and Telegraph Road to accommodate the new Wilson Bridge.

- Completed the project's first major landslide contract - a \$35 million contract to strengthen soils between Telegraph Road and U.S. Route 1, along Hunting Creek and Cameron Run – on time and on budget
- Completed one-quarter of a new Washington Street Beltway Overpass
- Commenced work on the largest contract in VDOT history - a \$147 million contract to rebuild the bulk of the U.S. Route 1 Interchange, as well as a \$38 million contract to build the interchange's new southern bridge ramps
- Substantially completed four Virginia environment mitigation contracts (valued at \$3.4 million)
- Launched a first-of-its-kind Bridge Bucks program to help commuters avoid construction-related delays, with more than 380 Virginia commuters participating



Route 28 public-private partnership: The Clark Construction Group, Inc. and its road and bridge construction subsidiary, Shirley Contracting Company, LLC are designing and building six high-capacity interchanges on Route 28 in Fairfax and Loudoun counties.

- Opened the Air and Space Museum Parkway in Dec. 2003
- Broke ground at Westfields Boulevard, the fourth of six interchanges to be built
- Completed construction work valued at over \$50 million, for a total of \$79 million to date, bringing the overall project completion to 46 percent

Maintaining Your Investment

Maintaining Infrastructure

- **repaved** 760 lane miles
- **installed** 10 miles of roadway lighting on I-66
- **repaired** more than 24,000 potholes
- **swept** 4,262 miles of pavement
- **painted** 4,440 miles of pavement markings
- **cleaned** 1,526 pipes and culverts
- **cleaned and repaired** 153 miles of ditches
- **cleaned and repaired** 3,150 drop inlets
- **mowed grass and removed litter** on 11,760 acres
- **removed** over 10,000 dead animals from the roadway
- **cleared** 200 acres of brush
- **treated** 635 acres of vegetation with herbicides along guardrail
- **replaced or repaired** sidewalks, curbs and gutters on 215 subdivision streets in 35 subdivisions
- **maintained and repaired** 449 bridges and structures
- **rehabilitated** 5 bridges
- **maintained** 65 commuter parking lots
- **made** 2,736 roadway lighting repairs

Helping Motorists and Responding to Incidents

- **patrolled** 107 miles of the Dulles Toll Road, Woodrow Wilson Bridge, 14th Street Bridge and interstates 66, 95, 395 and 495, 24 hours a day, 7 days a week
- **cleared and managed** 40,552 incidents including disabled motorists, debris and crashes
- **planned** for real-time traveler information services (511 service)
- **posted** 26,000 messages on overhead message

signs alerting motorists to traffic conditions

- **partnered** with Trafficland to make 110 interstate cameras available at www.trafficland.com
- **partnered** with Trichord developing real-time traffic information available at www.traffic.novacommuter.com
- **planned** and **hosted** the Third Annual National Capital Region Incident Management Conference
- **participated** in multi-jurisdictional wireless network project that allows emergency responders to communicate across jurisdictional boundaries

Managing Traffic Flow

- **used** federal safety funds to improve left turn lanes at 5 high volume crash sites
- **began** a pilot study on the effectiveness of placing signals on flash late at night
- **standardized** design for developer-funded traffic signals
- **installed** bus and emergency vehicle preemption at signals on Route 1 in Fairfax County
- **installed** a traffic camera in Tysons Corner
- **re-timed** 350 traffic signals improving traffic flow
- **responded** to 6,709 calls for traffic signal malfunctions
- **accepted** 42 developer built-and-funded new traffic signals into the state system
- **maintained** 1,200 signalized intersections
- **installed** 29 new traffic signals
- **implemented** a one-way street system in Occoquan to improve traffic flow and gain 26 parking spaces
- **installed** LED signals at 388 intersections
- **enabled** video distribution from VDOT's Smart Traffic Center to state and county police and Metro
- **responded** to 2,868 requests to investigate local traffic concerns (310 intersections for new traffic signals, 1,956 signs and pavement markings, 102 speed limit studies, 500 safety and operational studies)

Helping Pedestrians

- **installed** 55 pedestrian crossing signals
- **installed** 4 "countdown" pedestrian signals
- **installed** 3 audible pedestrian crossing devices for the visually impaired.
- **painted and re-striped** 490 pedestrian crossings
- **developed and implemented** new ADA design requirements for curb ramps



Enhancing Efficiency, Improving Service

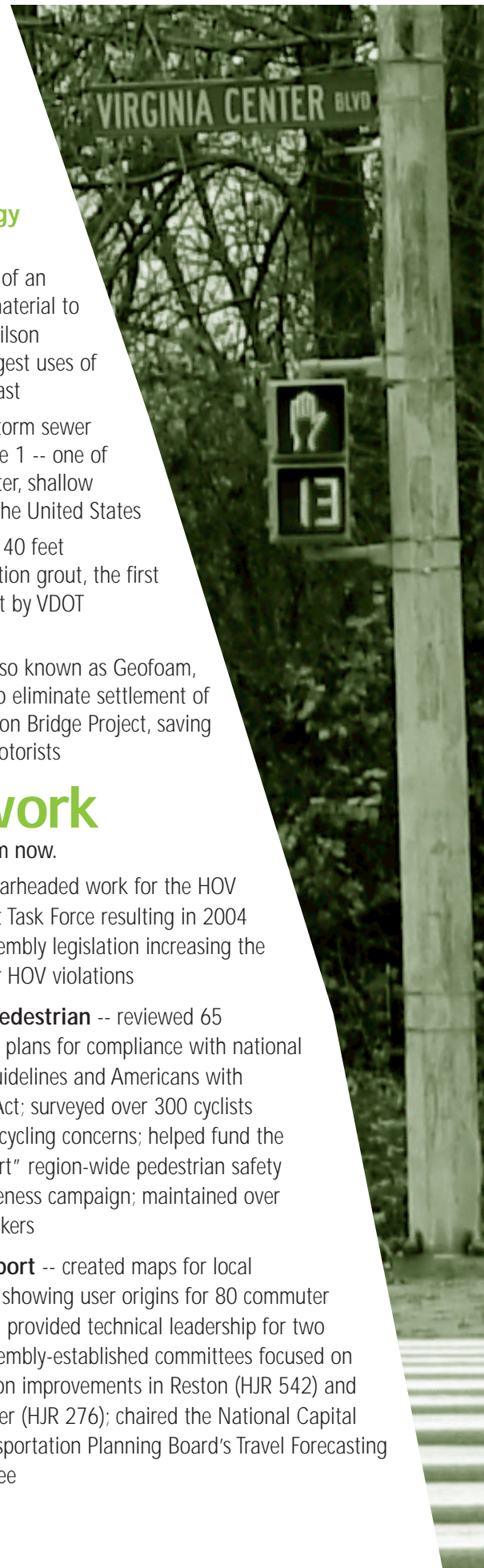
Technology helps build projects more quickly and efficiently, ultimately reducing delays to motorists.

Geographic Information Systems (GIS) enabled VDOT to:

- display the status of major routes, subdivision streets and customer calls in real time during snowstorms
- document traffic incidents and help Safety Service Patrol effectively deploy resources
- streamline pavement ratings for secondary roads
- track staff and equipment during snow and emergency operations
- reduce conflicts and costs associated with issuing permits on VDOT right of way

Innovations in geotechnology were used to:

- install over 33,000 cubic yards of an innovative lighter-than-water material to overcome soft ground at the Wilson Bridge Project -- one of the largest uses of this technology on the East Coast
- microtunnel a large diameter storm sewer beneath the Beltway near Route 1 -- one of the first successful large diameter, shallow depth, microtunnel projects in the United States
- stabilize soft soils to a depth of 40 feet in embankments using compaction grout, the first application of compaction grout by VDOT in Northern Virginia
- install Expanded Polystyrene, also known as Geofoam, an ultra light-weight material to eliminate settlement of soft soil at Route 1 for the Wilson Bridge Project, saving time and reducing delays for motorists



Planning for a Better Network

VDOT plans for the future of transportation -- tomorrow and 20 years from now.

Regional Programming -- provided data on over 700 projects for the FY04 Transportation Improvement Program (TIP); processed 16 TIP amendments to keep projects moving; helped develop "Time to Act," a report on the region's transportation financial situation

Regional Air Quality -- worked with state air agencies to develop new regional mobile source emission budgets; managed Virginia's component of the regional emission reduction program; assisted in allocation and programming of federal air quality funds

Modeling and Forecasting -- provided technical assistance on the Tri-County Parkway Study, Capital Beltway Study, I-95 and I-495 HOT lane proposals; concluded more than 20 traffic forecasts; assisted Loudoun County, Leesburg and Purcellville with traffic data and modeling support

Studies -- collected commuter pattern data for the American Legion Bridge study; evaluated conditions for the Tysons Circulation study; scoped a circulation study in the Annandale business district; and completed Northern Virginia Park-and-Ride Lot future needs study

HOV -- spearheaded work for the HOV Enforcement Task Force resulting in 2004 General Assembly legislation increasing the penalties for HOV violations

Bike and Pedestrian -- reviewed 65 construction plans for compliance with national and state guidelines and Americans with Disabilities Act; surveyed over 300 cyclists regarding bicycling concerns; helped fund the "Street Smart" region-wide pedestrian safety public awareness campaign; maintained over 100 bike lockers

Other Support -- created maps for local jurisdictions showing user origins for 80 commuter parking lots; provided technical leadership for two General Assembly-established committees focused on transportation improvements in Reston (HJR 542) and Tysons Corner (HJR 276); chaired the National Capital Region Transportation Planning Board's Travel Forecasting Subcommittee

Preserving the Environment

*VDOT builds beautiful roads...
getting you to great places.*

Wildflower Programs planted 8,500 perennials and 100,000 daffodil bulbs • maintained 110 acres of wildflowers • planted 1,200 tree saplings, shrubs and perennials to replace invasive vegetation



Environmental Compliance monitored 30 bridge and construction projects monthly

Watershed assisted Fairfax County's development of new watershed plans for its 30 watersheds

Landscaping Programs beautified approximately 4.5 miles of Route 123 in Fairfax County in conjunction with the road widening project

Noise Walls constructed seven noise barriers to protect communities

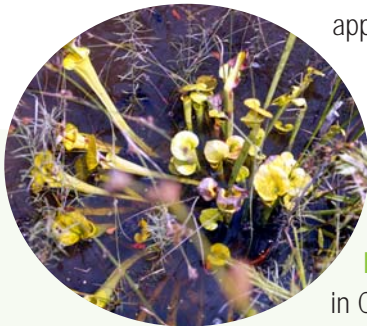
Bicycling completed a bicycle network plan for localities connecting trails throughout the District

Trails added more than 10 miles of bicycle/pedestrian trails

Adopt-a-Highway volunteers cleaned 1,800 miles of roadway throughout Northern Virginia saving the state \$270,000 dollars

Scenic Byways are distinctive routes with outstanding archeological, cultural, historic, natural, recreational and scenic value. VDOT added 10 miles to the existing 169 miles already designated in Northern Virginia

The Enhancement Program helps localities get federal funds for sidewalks, bike lanes and other non-road beautification projects. The Commonwealth Transportation Board approved \$2.2 million in enhancement funds to 12 new and on-going projects



Wetland Programs created 16 acres of wetlands and improved three acres of existing wetlands as part of the Woodrow Wilson Bridge Project • monitored 33.5 acres of newly created wetlands • restored 200 feet of stream along Route 1 in Lorton

Research worked with research scientists at the Virginia Transportation Research Council in Charlottesville to study effectiveness of wildlife crossings under Fairfax County Parkway • worked with researchers to determine effective deployment of technology to improve traffic operations of existing roads without having to build new roads.

Woodrow Wilson Bridge Project protected fish from lethal shock waves using an innovative air diaphragm system that creates a continuous air bubble curtain to absorb, reflect and refract harmful waves while pile driving for new bridge pier construction

VDOT's Believe it or not

- VDOT painted 4,440 miles of pavement markings
- Mowed grass/removed litter on 11, 760 acres
- Received 3,400 calls reporting dead deer in the roadway
- Responded to nearly 40,000 phone calls and 1,200 e-mails from the public ranging from requests for road conditions to reporting potholes

Wildlife installed infrared photo cameras at wildlife crossings along the Fairfax County Parkway in Fort Belvoir to monitor wildlife usage (particularlly deer) to reduce animal/vehicle incidents

Informing the Public

VDOT kept the community informed about VDOT programs and activities through:

- its web site (www.VirginiaDOT.org) with construction projects, Smart Travel, citizen information meetings and location hearings for new projects
- *Nuts and Bolts*, an electronic monthly newsletter for elected officials available at www.VirginiaDOT.org
- educational publications including the 2003 Snow Brochure, *Adventures in Driving* for new drivers, *Staying Safe*, an activity book for 10-14 year-olds and *Activity Book* for young children
- participation in job/career fairs
- 30 public meetings districtwide
- Crash Course, a multi-sensory education program with the Virginia State Police, educating nearly 7,000 driver education students in Northern Virginia high schools about how to drive safely through construction work zones
- county fairs and civic and community meetings



Designing Improvements

It takes dozens of reviews, inspections and meetings with homeowners, elected officials and technical and county staff to bring a project through design.

- completed design of 28 projects worth \$402.5 million so they could be advertised for construction
- advertised 44 projects worth \$380 million
- acquired 53 acres of land and 37 acres of easements worth over \$25 million and involving over 125 property owners in order to build and improve roads



Protecting Your Investment

- Issued 7,111 permits to water, sanitary, electric and gas utilities, telecom and cable companies, developers, builders, homeowners and local governments for projects in the state right of way
- Inspected and accepted into the state maintenance system nearly 43 centerline miles of new road
- Reviewed 280 permit applications for bridge structures, traffic sign/signal structures and sound barriers for private developers
- Reviewed nearly 4,000 private sector rezoning and site plan applications

Awards

AASHTO "Trailblazer Award" (American Association of State Highway & Transportation Officials) for Northern Virginia Regional Bikeway and Trail Network. This study catalogued existing trails and made recommendations for improving network to encourage biking and walking.

AASHTO "Pathfinder Award" in Team Excellence for Virginia's Construction Utility Relocation Team (CURE) recognizing the highest standards of quality, service and performance.

National ARTBA "Globe Award" (American Road & Transportation Builders Association) for The Woodrow Wilson Bridge Project's environmental efforts.

VDOT's Believe it or not

- The Route 1 Interchange construction contract at the Wilson Bridge for \$147 million was the largest single contract ever awarded by VDOT
- Fifty VDOT employees saved 3,400 miles per week by teleworking from home or an alternate work location
- In Northern Virginia, nearly 72 percent of the population drive alone to work, 12 percent carpool, 9 percent use public transportation and 3.6 percent telework